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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,196	04/23/2001	John P. O'Loughlin	TRW(VSSIM)4719-1	2264

26294 7590 04/27/2005

TAROLLI, SUNDHEIM, COVELL & TUMMINO L.L.P.
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CLEVEVLAND, OH 44114

EXAMINER

LUM VANNUCCI, LEE SIN YEE

ART UNIT	PAPER NUMBER
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3611

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/840,196

Applicant(s)

O'LOUGHLIN ET AL.

Examiner

Ms. Lee S. Lum

Art Unit

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41, 46 and 48-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-41, 46 and 48-62 is/are allowed.
- 6) ☒ Claim(s) 63 and 64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. A RCE and Amendment were filed 5/3/04 in which Claims 63 and 64 were also added. The Claims presented for examination are 1-41, 46, 48-64.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 63 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Einsiedel et al 6164688 in view of Reynolds et al 6155600, and Materna et al 5433476.

Einsiedel discloses an apparatus for protecting a vehicle occupant comprising
Inflatable side curtain 14 with a length extending along the vehicle side,
Fill tube 12 for directing a gas to inflate the curtain for a time sufficient to protect an occupant in a rollover.

The reference does not disclose the gas as helium, nor a fill tube as heating the helium to a temperature about equal to an ambient temperature in which the curtain is deployed. Reynolds shows these features with

Helium without pyrotechnic material (c2, ln 14-27), and,
Fill tube (as unidentified tubular portion of inflator 18), with air inlets 36, as heating the helium to about ambient temperature, as provided in c7, second complete paragraph, with emphasis on

In 26-28 - "the piston 24...[compresses and increases] the temperature in the...gas 22", and In 38-40 - "ambient air is being drawn...through inlets 36 and is mixing with the...gas".

It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this arrangement, as shown in Reynolds, to provide an inflator and fill tube combination that will increase the temperature of the gas (helium) so to provide quick and maximum inflation of the airbag, thus maximize safety during a crash event.

Further, Materna provides some facts about helium in c11, ln 50, to c12, ln 48, including:
c11, ln 56-58 – “[its] high speed of sound helps to provide rapid discharge of the gas...”,
which means that its temperature will not decrease as quickly as
other gases,

c12, ln 1-3, and 22-25 – “in the temperature range of interest for inflator operation, there
is not significant spreading of the range of...output as a function of
temperature”... “[Thus] this provides the opportunity to transfer a
larger amount of heat back into the gas...”.

Therefore, Materna’s disclosure suggests that helium requires less external heating means to maintain/reach ambient temperature of the vehicle/environment.

3. **Claims 1-41, 46 and 48-62 are allowable** because prior art does not disclose an apparatus as described above further comprising, *inter alia*, a inflation source inflating the airbag to a first desired pressure, and maintain the inflation above a second desired pressure, less than the first pressure, for at least the initial 5-7 seconds of inflation.

4. The prior art made of record, and not relied upon, is pertinent to this disclosure: Rink et al 6221186.

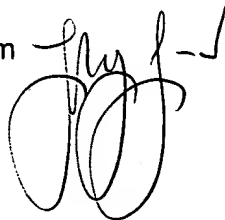
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5. Communication with the Examiner and USPTO

Any inquiry concerning this communication, or others, should be directed to Ms. Lum at 571 272-6649, M-F, 9-5. If she cannot be reached, her supervisor, Ms. Lesley Morris, may be reached at 571 272-6651. Our central fax number is 703 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) System. For unpublished applications - private PAIR only. For published applications - private or public PAIR. For more information re PAIR - <http://pair-direct.uspto.gov>. Questions re private PAIR - contact the Electronic Business Center (EBC) at 866 217-9197.

Ms. Lee S. Lum
Examiner
4/25/05

A handwritten signature in black ink, appearing to be 'Lum' with a stylized flourish at the end.